

REMARKS

This is intended as a full and complete response to the Office Action dated July 29, 2005, having a shortened statutory period for response set to expire on October 29, 2005. Please reconsider the claims pending in the application for reasons discussed below.

In the specification, paragraph [0025] has been amended to correct minor editorial problems.

Claims 1-22 remain pending in the application and are shown above. Claims 1-6, 11-18, and 22 stand rejected and claims 7-10 and 19-21 stand objected to by the Examiner. Reconsideration of the claims is requested for reasons presented below.

Claims 16 and 17 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 16 and 17 are amended to clarify the claimed subject matter and Applicants request withdrawal of this rejection. These amendments are not presented to distinguish a reference, thus, the claims as amended are entitled to a full range of equivalents.

Claims 1-6, 11-18 and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of *Lackritz, et al.* (U.S. Publication No. 2004/0046963) and *Savas, et al.* (U.S. Publication No. 2005/0112883).

The Examiner relies on *Lackritz* as teaching "a method for forming a waveguide structure on a substrate surface." The Examiner acknowledges that *Lackritz* does not teach the use of amorphous carbon for depositing an amorphous carbon hardmask on the core layer, but relies on *Savas* as teaching the use of an amorphous carbon hardmask and asserts it would have been obvious to one skilled in the art at the time the invention was made to use the amorphous carbon hardmask of *Savas* as the hardmask in the waveguide structure of *Lackritz*.

Applicants respectfully submit that the combination of *Lackritz* and *Savas* does not suggest or motivate one of ordinary skill in the art to modify *Lakritz* to include an amorphous carbon hardmask as suggested by the Examiner. *Lackritz* does not describe hardmask materials other than amorphous silicon. Further, *Savas* does not describe

using the amorphous carbon hardmask for the etching of core layers as recited in the pending claims.

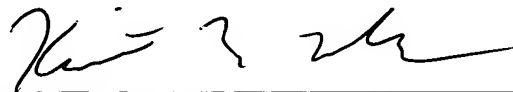
Therefore, *Lackritz* and *Savas*, alone or in combination, do not motivate one of ordinary skill in the art to use an amorphous carbon hardmask in the method for forming a waveguide structure on a substrate surface, as recited in claims 1 and 11, and claims 2-6, 12-18, and 22 dependent thereon. Accordingly, Applicants submit that claims 1-6, 11-18, and 22 are allowable, and respectfully request withdrawal of this rejection.

Claims 7-10 and 19-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants appreciate the finding of allowable subject matter and will re-write the claims if the rejection of the base claims is not withdrawn.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicants believe that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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